

Recovery Plan Action Status

Plan Name: South Florida Multi-Species Recovery Plan (68 spp.)

Plan Status: Final

Plan Date: 18-May-99

Lead Agency: USFWS

Lead Office: South Florida Ecological Services Field Office

**(772)
562-3909)**

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h1.1.1	Continue Federal acquisition efforts.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired; suitable habitat acquired in CLNWR and NKDR. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h1.1.2	Support State acquisition efforts.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission	Work type not yet selected	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired. Action lead(s):
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h1.1.3	Support and encourage land acquisition by non-governmental agencies.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Non-governmental organizations	Work type not yet selected	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired. Action lead(s): NGO
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-h1.2.1	Protect tree snails on public lands.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Key West Tropical Forest and Botanical Garden	Work type not yet selected	Labor type not yet selected	Cost dependent upon type of protection provided. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-h1.2.2	Protect tree snails on private lands where feasible through acquisition, conservation easements, and landowner outreach.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	Cost dependent upon type of protection provided. Action lead(s): FWS

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Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	2	sits-h1.2.3	Protect important core areas.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Cost dependent upon type of protection provided. Action lead(s): FWS
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-h1.2.4	Remove invasive exotic vegetation.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Florida Department of Agriculture and Consumer Services, South Florida counties, Key West Tropical Forest and Botanical Garden	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 3.0/acre); Total cost dependent upon number of acres infested with exotics. Action lead(s): FWS
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	2	sits-h1.2.5	Prevent habitat areas from being modified.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Task currently implemented on public lands and cost is included in responsible agency's budget. Action lead(s): FWS
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-h1.2.6	Restrict access to snail habitat on public lands.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission	Work type not yet selected	Labor type not yet selected	Task currently implemented on public lands and cost is included in responsible agency's budget. Action lead(s): FWS
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-h2.1	Restore both occupied and unoccupied tree snail habitat that has been degraded to optimal conditions.	Ongoing Current	FY 2005		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 1.0/acre); Total cost dependent upon number of acres restored. Action lead(s): FWS

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Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h2.2	Improve habitat by planting or encouraging native plant species.	Ongoing Current	FY 2005		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 0.5/acre); Total cost dependent upon number of acres improved. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h2.3	Create habitat by refilling and revegetating areas that have been destroyed or altered.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 1.5/acre); Total cost dependent upon number of acres created for habitat. Rock piles created as a result of dredging are considered potential klwr habitat and should not be removed. Action lead(s): KWTFBG
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-h2.4	Restore snail habitat at Key West Botanical Garden.	Partially Complete	FY 2005		U.S. Fish and Wildlife Service, The Nature Conservancy, South Florida counties, Key West Tropical Forest and Botanical Garden	Work type not yet selected	Labor type not yet selected	Costs dependent upon type of restoration and number of acres created for habitat. Action lead(s): KWTFBG
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h3.1.1	Determine minimum area required for snails to persist.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h3.1.2	Compare and characterize occupied tree snail habitat.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities

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Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h3.1.3	Investigate the effect of habitat change on the snail's persistence.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h3.1.4	Investigate the use of ornamental and exotic vegetation as food and habitat.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Key West Tropical Forest and Botanical Garden, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h3.2.1	Investigate movement patterns and the spatial utilization of habitat to determine important core areas.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h3.2.2	Determine if the amount and configuration of remaining occupied and unoccupied habitat is sufficient to support a stable population of Stock Island tree snails.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h4.0	Monitor the status of Stock Island tree snail habitat.	Ongoing Current	FY 2007		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-h5.0	Increase public awareness of Stock Island tree snail habitat and instill stewardship.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Non-governmental organizations	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS

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Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s1.1.1	Determine status of snails on Stock Island.	Partially Complete	FY 2007		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Key West Tropical Forest and Botanical Garden	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s1.1.2	Determine status of populations in Key West.	Partially Complete	FY 2007		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s1.2.1	Determine the status of snails in Key Largo subdivisions and other areas in Key Largo.	Partially Complete	FY 2007		U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	Completed by CLNWR in 1999/2000. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s1.2.2	Determine status of snails present in Calusa Cove.	Partially Complete	FY 2007		U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	Completed by CLNWR in 1999/2000. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s1.2.3	Determine status of snails in John Pennnekamp Coral Reef State Park.	Partially Complete	FY 2007		U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	Completed by CLNWR in 1999/2000. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s1.2.4	Determine status of snails in Crocodile Lake National Wildlife Refuge/Key Largo Hammocks State Botanical Site, Key Largo.	Partially Complete	FY 2007		U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	Completed by CLNWR in 1999/2000. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s1.3.1	Determine the status of snails at Monkey Jungle.	Not Started			U.S. Fish and Wildlife Service, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	See Forsy et al. (1996). Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s1.3.2	Determine status of snails in the Everglades National Park and Big Cypress National Preserve.	Not Started			U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	See Forsy et al. (1996). Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s1.4	Maintain and improve the GIS database for snail information.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS

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Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s2.1	Assign a biologist responsible for implementing recovery actions for threatened or endangered species of the Lower Keys.	Complete	FY 2000 - FY 2004	FY 2000 - FY 2004	U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	FWS biologist assigned to South Florida Ecological Services Office and stationed at Big Pine Key. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s2.2.1	Develop a standard protocol for conduction, monitoring, and evaluating all reintroduction, translocation, and supplementation efforts of Stock Island tree snails using the IUCN/SSC Guidelines for Reintroduction.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s2.2.2	Relocate snails to secure areas in the Lower Keys (Key West Botanical Gardens, Weapons Hammock, National Key Deer Refuge).	Not Started			U.S. Fish and Wildlife Service, Florida Fish and Wildlife Conservation Commission, Key West Tropical Forest and Botanical Garden	Work type not yet selected	Labor type not yet selected	Populations relocated during 1996-2000, excluding Weapons Hammock. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s2.2.3	Monitor all reintroduced/relocated populations.	Ongoing Current	FY 2007		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, South Florida counties	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s2.3	Utilize Federal regulatory mechanisms for protection.	Ongoing Current	FY 1995 - FY 1999		U.S. Bureau of Land Management, U.S. Department of Agriculture, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, Natural Resources Conservation Service, United States Coast Guard, U.S. Air Force	Work type not yet selected	Labor type not yet selected	Cost included in standard operating procedures of Federal agency's budget. Action lead(s): All Federal agencies

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Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s2.4	Provide information concerning Stock Island tree snails to Federal, State, county, and city agencies.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s2.5.1	Minimize the impacts of mosquito spraying and other herbicide use.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, South Florida counties	Work type not yet selected	Labor type not yet selected	Spraying prohibited in range of tree snail on public lands. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s2.5.2	Reduce illegal collecting.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Task currently conducted and cost is included in responsible agency's budget. Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s2.5.3	Minimize the impacts of native and non-native predators to snails.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s2.5.4	Develop a Memorandum of Agreement with Monroe County to ensure their actions do not harm the Stock Island tree snail.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, South Florida counties	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS, counties
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	3	sits-s3.1	Investigate the genetics of snails from different sites.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (Orthalicus reses (not incl. nesodryas))	2	sits-s3.2	Identify factors that affect the persistence of the Stock Island tree snail.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities

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Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	2	sits-s3.3.1	Determine subpopulations most vulnerable to extinction.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-s3.3.2	Determine the necessary number of subpopulations and level of exchange that will enable the snail to persist for 100 years.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-s3.4	Determine what constitutes a stable age structure and group size for the snail.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-s4.1	Develop methods to monitor presence of snails, population dynamics, and habitat use.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-s4.2	Develop methods to monitor demographic parameters.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	2	sits-s4.3	Monitor the success of tree snail reintroduction efforts.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, South Florida counties, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-s4.4	Determine the effects of relocated snails on flora and fauna already present.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities

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Stock Island tree snail (<i>Orthalicus reses</i> (not incl. <i>nesodryas</i>))	3	sits-s5.1	Increase public awareness and stewardship for the Stock Island tree snail.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS